

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P475170

Luminaire Tested: **22CZ2-39-HRP-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475170
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-39-HRP-UNV-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

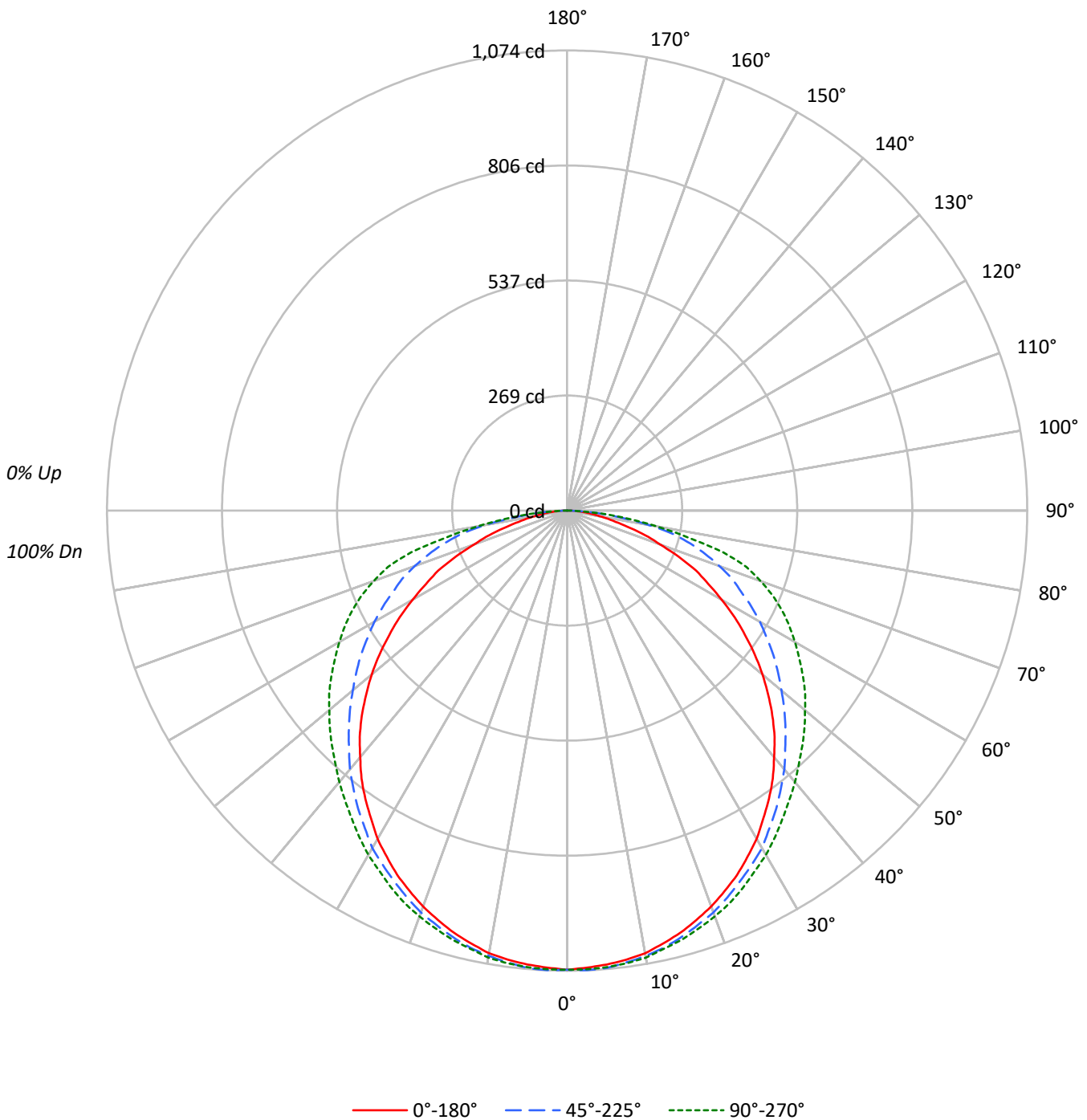
Lumens per Lamp: N/A
Luminaire Lumens: 3254.7 lumens
Efficiency: N/A
Efficacy: 111.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 29.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2884	2884	2884
5°	2873	2895	2890
10°	2867	2884	2895
15°	2842	2871	2888
20°	2816	2857	2887
25°	2786	2835	2884
30°	2749	2826	2884
35°	2698	2792	2880
40°	2640	2770	2907
45°	2579	2743	2953
50°	2493	2733	3034
55°	2379	2755	3150
60°	2243	2795	3304
65°	2118	2850	3530
70°	1810	2972	3780
75°	1516	3096	3928
80°	1243	2991	3278
85°	1074	2217	2408



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.6	3.1
10°-20°	290.6	8.9
20°-30°	440.3	13.5
30°-40°	531.7	16.3
40°-50°	558.7	17.2
50°-60°	525.7	16.2
60°-70°	438.3	13.5
70°-80°	290.4	8.9
80°-90°	77.4	2.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	832.5	25.6
0°-40°	1364.2	41.9
0°-60°	2448.5	75.2
0°-90°	3254.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3254.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1072	1072	1072	1072	1072	
5°	1064	1066	1072	1072	1070	101
15°	1020	1024	1031	1035	1037	288
25°	938	944	955	967	971	432
35°	821	830	850	868	877	513
45°	678	688	721	758	776	522
55°	507	530	587	647	671	454
65°	333	361	448	521	554	324
75°	146	203	298	359	378	158
85°	35	53	72	78	78	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1071.6	1071.6	1071.6	1071.6	1071.6
2.5°	1067.7	1069.7	1073.8	1073.8	1071.6
5°	1063.5	1065.5	1071.6	1071.6	1069.7
7.5°	1057.3	1059.5	1063.5	1067.7	1065.5
10°	1049.2	1051.2	1055.3	1059.5	1059.5
12.5°	1034.8	1036.8	1045.0	1047.2	1047.2
15°	1020.3	1024.5	1030.7	1034.8	1036.8
17.5°	1002.0	1006.0	1014.2	1022.5	1022.5
20°	983.5	987.5	997.8	1006.0	1008.0
22.5°	960.8	967.0	977.3	987.5	991.7
25°	938.4	944.5	954.7	967.0	971.2
27.5°	911.5	917.7	932.2	946.5	948.5
30°	884.8	891.0	909.5	921.8	928.0
32.5°	852.0	860.2	878.7	897.2	903.3
35°	821.2	829.5	850.0	868.5	876.7
37.5°	788.4	796.5	819.2	841.9	852.0
40°	751.4	761.7	788.4	813.0	827.4
42.5°	716.5	726.9	753.6	786.4	800.7
45°	677.6	687.7	720.7	757.5	776.0
47.5°	636.4	648.7	687.7	733.1	751.4
50°	595.4	609.7	652.9	704.2	724.7
52.5°	552.2	570.7	620.1	675.6	700.0
55°	507.1	529.8	587.2	646.7	671.4
57.5°	463.9	484.6	552.2	615.9	642.5
60°	416.8	443.4	519.4	585.1	613.9
62.5°	371.6	400.4	484.6	554.4	585.1
65°	332.6	361.3	447.6	521.4	554.4
67.5°	281.3	320.3	416.8	486.6	519.4
70°	230.0	283.3	377.8	449.6	480.4
72.5°	191.0	242.3	338.8	410.6	439.4
75°	145.8	203.3	297.8	359.3	377.8
77.5°	108.8	168.3	254.6	285.5	287.5
80°	80.2	129.3	193.0	203.3	211.5
82.5°	55.5	90.3	125.3	137.5	141.6
85°	34.8	53.3	71.8	78.0	78.0
87.5°	18.5	20.5	24.7	24.7	24.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)